1. How can data analytics improve business decisions?
2. Compare descriptive analytics and diagnostic analytics
3. Solve the relative and absolute frequencies for the following data (Gender Attribute) Gender: M M F F F M M F F
4. List out the Multivariate frequency's types
5. Compare Active Learning and Reinforcement Learning
6. Define Normal Distribution
7. Who uses R?
8. List out the rules to define a variable name in $R$.
9. Illustrate general format of factors in R.
10. List the importance of data visualization.
11. Construct the CRISP-DM Methodology in detail with suitable example
12. Organize about the short taxonomy about data analytics with suitable example
13. Experiment with the following statement, "How do you determine whether a statistical relationship exists between two attributes are not"
14. Explain in detail about the Multivariate analysis in detail with an example
15. Experiment with the different types of methods used in Survival Analysis using suitable example
16. Apply linear regression using the method of least squares to the following data and predict the crop yield for rain fall of 5 cm
17. Analyze $R$ vector object creation, accessing and manipulating vector elements in detail with example. In the vector $v<-c(1,12,3,14,-1,-3)$ count the number of vector values present in range between -1 to 8 using $R$
18. Explain how you can find the index of maximum and minimum value in a matrix using $R$.
19. Illustrate data frame concept in $R$ and clarify how you will merge two data frames with example
20. Construct the data visualization techniques for student performance in R programming
21. To use Random Forest to predict the outcome for the following case: Consider whether a dataset based on which we will determine whether to buy house or not

22. Examine the following air quality data set and visualize data set using bar chart, box plots.

| Ozone | Solar R. Wind | Temp |  | Month |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 41 | 190 | 7.4 | 67 | 5 | 1 |
| 36 | 118 | 8 | 72 | 5 | 2 |
| 12 | 149 | 12.6 | 74 | 5 | 3 |
| 18 | 313 | 11.5 | 62 | 5 | 4 |
| NA | NA | 14.3 | 56 | 5 | 5 |
| 28 | NA | 14.9 | 66 | 5 | 6 |

